

Binh-Minh NGUYEN

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Citizenship: Vietnamese

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US immigrant status: Permanent Resident (Category: National Interest Waiver)

EDUCATION:

- 2010 Center for Quantum Device (CQD), Northwestern University
PhD in Electrical Engineering (Solid State and Photonics).
Dissertation: "*Theoretical design and material growth of Type-II Antimonide-based superlattices for infrared detection and imaging*".
Advisor: Prof. Manijeh Razeghi.
- 2007 Ecole Polytechnique, Palaiseau Cedex, France
Diplôme de l'Ecole Polytechnique (a Masters degree in a specialized domain: Materials Science).
- 2005 Ecole Polytechnique, Palaiseau Cedex, France
Titre d'Ingénieur diplômé de l'École Polytechnique (a Masters degree which corresponds to a multidisciplinary scientific education).
- 1999-2002: Hanoi University of Natural Science, Faculty of Physics, Honours Program for gifted students.

WORK EXPERIENCE:

- Jan 2012 – present **Director's Postdoctoral Fellow**, Center for Integrated Nanotechnologies (CINT), Los Alamos National Lab.
Proposal title: "Minority carrier devices based on concentric Si/Ge nanowire structures"
Mentors: Dr. Shadi Dayeh and Dr. Tom Picraux.
- Working on the device physics modeling, fabrication, characterization of novel device concepts based on minority carriers in Ge/Si core/shell nanowire structures.
- Access to CINT facility, frequent user of JBX-6300 ebeam lithography system, Bosch etchers, atomic layer deposition, scanning electron microscopy, rapid thermal annealing, electron beam metal evaporator (at Core facility) and CVD nanowire growth system (at Gateway facility).
- Jan 2011 - Dec 2011 **Research Assistant Professor**, EECS Department, Northwestern University
- Leading the research activity of the "Type-II superlattice" group at CQD: Managing a group of 6-8 students working on diverse topics for the development of Type-II superlattice technology.
- Exploring novel phenomena and physics of surface processes in Type-II superlattice detectors.
- Researching the growth, fabrication and characterization of 2-color long wavelength infrared (LWIR/LWIR) Focal Plane Arrays (FPAs), large format (1024x1024) FPAs.
- Nov 2010 - Dec 2011 **Technical Director**, MP Technologies
- Writing proposals in response to government solicitations, currently serving as Principle Investigator (PI) for several awarded/pending SBIR proposals:
- Preparing technical reports and reviews for ongoing projects on Type-II superlattice infrared detectors and FPAs.
- Conducting research and development for processing and fabrication of single-element detectors and FPAs based on Type-II superlattices.
- Oct 2010 - Dec 2010 **Post Doctoral Fellow**, Center for Quantum Devices, Northwestern University
Leading the research activities of and conducting research in the "Type-II superlattice" group at CQD.

2005-2010	Research Assistant , Center for Quantum Devices, Northwestern University. Modeling the band structure of and growing type II InAs/GaSb superlattices for infrared detectors.
2004	Intern , Laboratory of Irradiated Solids, Ecole Polytechnique, France. Researching the fabrication and characterization of YBaCuO superconductors: effect of levitation and attraction.
2003-2004	Intern , Laboratory of Condensed Matter Ecole Polytechnique. Modeling the liquid crystal equilibrium states in liquid crystals.
2002	Intern , Institute of Physics, Vietnamese Academy for Science and Technology. Modeling high TC superconductors.
1999-2001	Fellow , FPT Technology Center for Young Talents - The Corporation for Financing & Promoting Technology (FPT). Participating in workshops and trainings on leadership, management and communication skills.

HIGHLIGHTED RESULTS:

- **World's highest** quantum efficiency for Type-II InAs/GaSb superlattice photodetectors.
- **World's first** demonstration of Type II InAs/GaSb superlattice photodiodes with a P-on-N polarity.
- **Invention** of M-structure superlattice and *pMn* device architecture for very high dynamic differential resistance of Type-II InAs/GaSb/AlSb superlattice photodiodes.
- **Invention** of the *pMp* device architecture, a minority electron unipolar photodetector based on Type-II superlattices and M-structure.
- Provided excellent materials for the fabrication and demonstration of **World's first and highest quality** superlattice-based infrared focal plane arrays (at 5, 10 and 12 μm cut-off wavelength)
- Demonstration of \sim 15 μm thick, superlattice grown with very high structural quality using solid source molecular beam epitaxy.
- Demonstration of High Operating Temperature (HOT) midwave infrared (MWIR) photodetectors with *pMp* and *pMn* architectures. Background limited performance (BLIP) was achieved at 170-180K for 5 μm cut-off detectors. **World's first** HOT FPA based on Type-II superlattice demonstrated human imaging at the operating temperature below 170K.
- **World's first and unique** demonstration of High performance MWIR and LWIR Type-II superlattice photodiodes on GaAs substrates. Demonstrated FPA imaging based on these materials.
- Excellent Type-II superlattice quality with excellent uniformity across a 3" GaSb substrate. **World's first** high resolution, high performance 1Kx1K FPA based on this material was demonstrated.
- Excellent Type-II superlattice quality for the demonstration of **World's first** superlattice-based 2-color LWIR/LWIR FPA.

HONORS AND AWARDS:

- 2012: Los Alamos National Lab's Director Postdoctoral Fellowship.
- 2010 IEEE Photonics Society Graduate Student Fellowship.
- 2010 SPIE (The International Society for Optical Engineering) scholarship in Optical Science and Engineering.
- 2010 ECS (Electro Chemical Society) Edward G. Western Summer Fellowship.
- 2009 SPIE scholarship in Optical Science and Engineering.
- Department and Graduate School's Conference travel grants for SPIE 2008 (San Diego) and IEEE 2010 (Denver).

- Ecole Polytechnique – “Felicitations” for internship work at the Center for Quantum Devices (2005).
- French Government Fellowship (EGIDE) during study at Ecole Polytechnique (2002-2005).
- Several National prizes in Physics and Analysis at the National Olympics for high school (1998, 1999) and university students (2000).
- Vietnamese Government fellowship (1999-2002) and Japanese Yamaha scholarship (2000) for excellent academic performance.

PUBLICATIONS AND PRESENTATIONS: (full list available in next pages)

- 32 peer-reviewed journal papers including 8 first-author Applied Physics Letters.
- 25 international conference proceedings, including 8 invited papers.
- 7 international conference presentations and 3 invited seminars.
- 5 book chapters.

SKILLS:

- **Theoretical Modeling**
 - Strong background in advanced mathematics (linear algebra, advanced real and complex analysis) and modern physics (quantum mechanics, relativity, statistical physics, theoretical mechanics and electromagnetics).
 - Extensive knowledge and practical experience in band structure theory of solids: Empirical Tight Binding Method, K.p Method and Density Functional Theory.
 - Programming skills with Matlab and Mathematica, Lumerical FDTD Solutions. Working knowledge with Java and C++.
- **Highly proficient with Solid Source Molecular Beam Epitaxy for III-V semiconductor and superlattice growth.**
 - 6 years of experience with Molecular Beam Epitaxial growth and reactor maintenance.
 - Highly proficient with the InAs/GaSb superlattice growth process. Developed a variety of structural designs for III-V heterostructures.
 - Strong understanding of III-V semiconductor growth mechanisms and ultra-high vacuum systems.
 - Performed over 1000 independent growths and supervised more than 500 growths.
- **Semiconductor Structural Characterization Techniques**
 - Proficient with high resolution x-ray diffraction (HRXD), x-ray simulation, atomic force microscopy (AFM), optical profilometry, scanning electron microscopy (SEM) including secondary, backscattered electron imaging and EDX analysis.
 - Working knowledge of transmission electron microscopy (TEM) and carrier concentration measurement systems (Polaron, Hall Effect).
- **III-V semiconductor processing techniques:**
 - Proficient with contact electron beam lithography (JBX-6300) photolithography, wet chemical etching, dry-etching with electron cyclotron resonance reactive ion etching (ECR-RIE) and inductively coupled plasma (ICP), Plasma-Enhanced Chemical Vapor Deposition (PECVD), electron beam and thermal evaporation, gold wire-bonding, flip-chip bonding (SET FC-150 flip chip bonder).
 - Extensive experience with focal plane array fabrication.
- **Photodetector Testing:**
 - Extensive experience with electrical and optical measurement systems for cryogenic temperature measurements: I-V, capacitance, photoluminescence and FTIR, optical response.
 - Basic understanding of radiometric tests on focal plane arrays.
- **Device Optimization:**
 - Extensive understanding of infrared photovoltaic detector physics.
 - Developed an optimization scheme and novel device architectures for Type II InAs/GaSb superlattice photodetectors with higher dynamic differential resistance and higher quantum efficiency.

- **Critical Writing:**

- Proficient with academic writing: prepared 10 journal papers, 14 conference proceedings, drafted and edited many other papers; prepared 5 book chapters.
- Familiar with contractual writing tasks: prepared more than 30 abstracts, white papers, project proposals, and wrote ~100 contract technical reports including monthly reports, quarterly reports, annual reports and project final reports.
- Extensive experience in presentation preparation for conference talks, contract kick-offs and reviews.

LANGUAGE AND COMPUTER SKILLS:

- Fluent in French, English and Vietnamese.
- Computer: programming languages and software: Java, Matlab, Maple, Mathematica, Lumerical FDTD Solutions, Origin, Microsoft Office.

PROFESSIONAL SERVICES AND SOCIAL ACTIVITIES:

- Member of Editorial Board for Dataset Papers in Optics.
- Frequent reviewer for: Nanotechnology, Optics Letters, Optics Express, Journal of Applied Physics, Journal of Physics D (Applied Physics), Applied Optics, Physica E: Low dimensional systems and nanostructures, Semiconductor Science and Technology.
- Member of Cleanroom Emergency Response Team from 2008 to 2011.
- Member of SPIE, IEEE
- Active in many social and volunteer organizations: Ex-Vice President of Club and Forum of physics students. Ex-Vice President of Dong Hanh - Group of Vietnamese students in France providing scholarships to students in difficult situations in Vietnam.
- Organizer of VLVN CUP 1 and 2 (2005-2006 and 2006-2007), a yearlong, nationwide online physics contest for Vietnamese high school students.
- Math and Physics Tutor (in Vietnamese, French and English) from 1999 to 2009.

REFERENCE (available up on request)

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Los Alamos Director's Postdoctoral Fellow

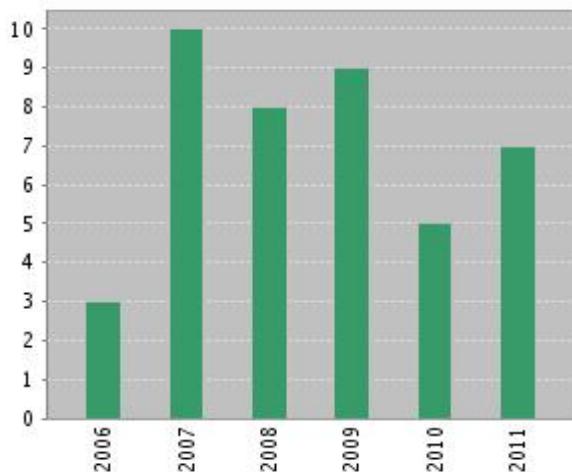
Center for Integrated Nanotechnologies,

Los Alamos National Laboratories

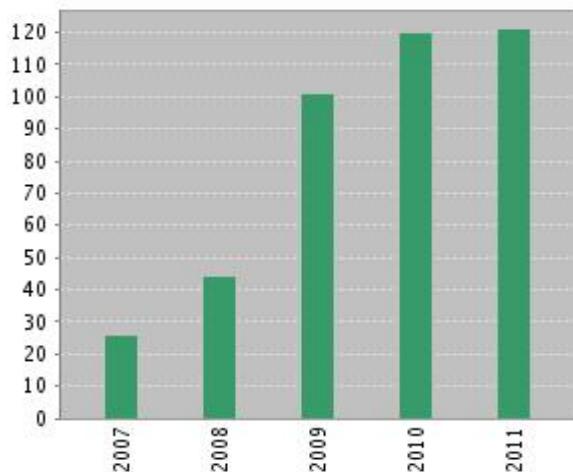
<http://www.researcherid.com/rid/B-6411-2011>

Publication list (Updated October 2011)

Published Items in Each Year



Citations in Each Year



- ❖ 32 peer-reviewed journal papers including 8 first-authorship Applied Physics Letters.
- ❖ 25 conference proceedings, including 10 invited papers.
- ❖ 7 international conference presentations.
- ❖ 3 invited seminars.
- ❖ 5 book chapters
- ❖ ***h-index = 13 (as of October 2011)***
- ❖ ***Number of times cited: 450***
- ❖ ***Top cited publications:***

Binh-Minh Nguyen, Darin. Hoffman, Yajun. Wei, Pierre-Yves Delaunay, Andrew Hood, Manijeh Razeghi, “Very high quantum efficiency in-Type II InAs/GaSb superlattice photodiodes with a cutoff of $12\mu m$ ”, Applied Physics Letters, Vol. 90, No. 23, p. 231108 (2007): **Cited 49 times**

Andrew Hood, Pierre-Yves Delaunay, Darin Hoffman, **Binh-Minh Nguyen**, Yajun Wei, Manijeh Razeghi, and Vaidya Nathan, “Near bulk-limited ROA of long-wavelength infrared type-II InAs/GaSb superlattice photodiodes with polyimide surface passivation”, Appl. Phys. Lett. 90, 233513 (2007): **Cited 48 times**

Binh-Minh Nguyen, Darin Hoffman, Pierre-Yves Delaunay, Manijeh Razeghi, “Dark current suppression in type II InAs/GaSb superlattice photodiodes with M-structure barrier”, Applied Physics Letters, Vol. 91, p. 163511 (2007): **Cited 37 times**

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Up-coming articles:

1. C. Zhou, **B-M Nguyen**, M. Razeghi, M. Grayson, “*Thermal Conductivity of InAs/GaSb Type II superlattice*”, accepted for publication in Journal of Electronics Materials.

Peer-review articles:

2. A. Haddadi, S. Ramezani-Darvish, G. Chen, A. M. Hoang, **B-M. Nguyen**, M Razeghi, “*High Operability 1024×1024 Long Wavelength Type-II Superlattice Focal Plane Array*”, IEEE Journal of Quantum Electronics, vol 48 (2), page 221 (2012)
<http://dx.doi.org/10.1109/JQE.2011.2175903>
3. G. Chen, **B.-M. Nguyen**, A. M. Hoang, E. K. Huang, S. R. Darvish and M. Razeghi, “*Elimination of Surface Leakage in Gate Controlled Type-II InAs/GaSb Mid-infrared Photodetectors*”, Applied Physics Letters 99, 183503 (2011).
<http://link.aip.org/link/doi/10.1063/1.3658627>
4. **B-M. Nguyen**, G. Chen, A. M. Hoang, S. Abdollahi Pour, S. Bogdanov and M. Razeghi, “*Effect of contact doping in superlattice-based minority carrier unipolar detectors*”, Applied Physics Letters 99, 033501 (2011).
<http://dx.doi.org/doi/10.1063/1.3613927>
5. M. Razeghi, S. Abdollahi Pour, E. K. Huang, G. Chen, A. Haddadi and **B.-M. Nguyen**, “*Type-II InAs/GaSb photodiodes and focal plane arrays aimed at high operating temperatures*”, Opto-Electronics Review, 19(3), p261 (2011). (**invited**)
<http://www.springerlink.com/content/235r7407002tn46n/>
6. E. K.-w. Huang, A. Haddadi, G. Chen, **B.-M. Nguyen**, M.-A. Hoang, R. McClintock, M. Stegall, and M. Razeghi, “*Type-II superlattice dual-band LWIR imager with M-barrier and Fabry-Perot resonance*,” Opt. Lett., 36(13), 2560-2562 (2011).
<http://www.opticsinfobase.org/ol/abstract.cfm?URI=ol-36-13-2560>
7. S. Bogdanov, **B. M. Nguyen**, A. M. Hoang, and M. Razeghi, “*Surface leakage current reduction in long wavelength infrared type-II InAs/GaSb superlattice photodiodes*”, Applied Physics Letters 98, 183501-3 (2011).
<http://link.aip.org/link/?APL/98/183501/1>
8. **B-M Nguyen**, G. Chen, M-A. Hoang, M. Razeghi, “*Growth and characterization of long wavelength infrared Type-II superlattice photodiodes on a 3" GaSb wafer*”, IEEE Journal of Quantum Electronics, vol. 47, page 686, May 2011.
<http://dx.doi.org/10.1109/JQE.2010.2103049>
9. S. A. Pour, E. K. Huang, G. Chen, A. Haddadi, **B.- M. Nguyen**, and M. Razeghi, “*High operating temperature midwave infrared photodiodes and focal plane arrays*

based on type-II InAs/GaSb superlattices”, Applied Physics Letters 98, 143501-3 (2011).

<http://link.aip.org/link/?APL/98/143501/1>

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10. P. Manurkar, S. Ramezani-Darvish, **B.-M. Nguyen**, M. Razeghi, and J. Hubbs, “*High performance long wavelength infrared mega-pixel focal plane array based on type-II superlattices*”, Applied Physics Letters, 97(19), 193505 (2010).

<http://link.aip.org/link/?APL/97/193505/1>

Cited 8 times

11. E. K. W. Huang, P. Y. Delaunay, **B.- M. Nguyen**, S. A. Pour, and M. Razeghi, “*Photovoltaic MWIR Type-II Superlattice Focal Plane Array on GaAs Substrate*” Quantum Electronics, IEEE Journal of, 46(12), 1704-1708 (2010).

<http://dx.doi.org/10.1109/JQE.2010.2061218>

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12. M. Razeghi and **B.-M. Nguyen**, “*Band gap tunability of Type II Antimonide-based superlattices*”, Physics Procedia 3, 1207 (2009).

<http://www.sciencedirect.com/science/article/B8JJ4-4YCHFTN-R/2/a7300a857355a1c710f1582d5ca90d65>

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13. **Binh-Minh Nguyen**, Simeon Bogdanov, Siamak Abdollahi Pour, and Manijeh Razeghi, “*Minority electron unipolar photodetectors based on type II InAs/GaSb/AlSb superlattices for very long wavelength infrared detection*”, Applied Physics Letters, 95(18) pp. 183502 (2009)

<http://link.aip.org/link/?APPLAB/95/183502/1>

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14. Siamak Abdollahi Pour, **Binh-Minh Nguyen**, Simeon Bogdanov, E.K. Huang, and Manijeh Razeghi, “*Demonstration of high performance long wavelength infrared type-II InAs/GaSb superlattice photodiodes grown on GaAs substrate*”, Applied Physics Letters, 95(17), pp. 173505 (2009)

<http://link.aip.org/link/?APPLAB/95/173505/1>

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15. **Binh-Minh Nguyen**, Darin Hoffman, Edward Kwei-wei Huang, Simeon Bogdanov, Pierre-Yves Delaunay, Manijeh Razeghi, Meimei Tidrow, “*Demonstration of Mid-Infrared Type II InAs/GaSb superlattice photodiodes grown on GaAs substrate*”, Applied Physics Letters, 94, (22), pp. 223506 (2009)

<http://link.aip.org/link/?APPLAB/94/223506/1>

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16. Manijeh Razeghi, Darin Hoffman, **Binh – Minh Nguyen**, Pierre – Yves Delaunnay, Edward Kwei-wei Huang, Mei – Mei Tidrow, Vaidya Nathan, “*Recent advances in LWIR Type – II InAs/GaSb superlattice photodetectors and focal plane arrays at the Center for Quantum Devices*”, accepted for publication in Proceeding of IEEE, IEEE (2009)

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17. Pierre-Yves Delaunay, **Binh-Minh Nguyen**, Darin Hoffman, Edward Kwei-Wei Huang and Manijeh Razeghi, "Background Limited Performance of Long Wavelength Infrared Focal Plane Arrays Fabricated From M-Structure InAs–GaSb Superlattices, IEEE Journal of Quantum Electronics, **45**, 157 (2009)
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18. E. K.-w. Huang, D. Hoffman, **B.-M. Nguyen**, P.-Y. Delaunay, and M. Razeghi, "Surface leakage reduction in narrow band gap type-II antimonide-based superlattice photodiodes", Applied Physics Letters, vol. 94, pp. 053506, 2009.
<http://link.aip.org/link/?APPLAB/94/053506/1>
Cited 19 times
19. **B.-M. Nguyen**, D. Hoffman, P.-Y. Delaunay, E. K.-W. Huang, M. Razeghi, and J. Pellegrino, "Band edge tunability of M-structure for heterojunction design in Sb based type II superlattice photodiodes," Applied Physics Letters, vol. 93, pp. 163502, 2008
<http://link.aip.org/link/?APPLAB/93/163502>
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20. **B.-M. Nguyen**, D. Hoffman, E. K.-w. Huang, P.-Y. Delaunay, and M. Razeghi, "Background limited long wavelength infrared type-II InAs/GaSb superlattice photodiodes operating at 110 K," Applied Physics Letters, vol. 93, pp. 123502, 2008
<http://link.aip.org/link/?APL/93/123502>
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21. Darin Hoffman, **Binh-Minh Nguyen**, Edward Kwei-wei Huang, Pierre-Yves Delaunay, Manijeh Razeghi, Meimei Z. Tidrow, and Joe Pellegrino, "The effect of doping the M-barrier in4 very long-wave type-II InAs/GaSb heterodiodes," Applied Physics Letters 93(3),031107 (2008)
<http://link.aip.org/link/?APPLAB/93/031107/1>
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22. Pierre-Yves Delaunay , **Binh-Minh Nguyen** , Darin Hoffman , Andrew Hood , Edward Huang , Manijeh Razeghi, Meimei Z. Tidrow, "High quantum efficiency two color LWIR-LWIR type-II InAs/GaSb n-i-p-p-i-n photodiodes", Applied Physics Letters, Vol. 92, p. 111112 (2008).
<http://link.aip.org/link/?APL/92/111112>
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23. Pierre-Yves Delaunay, **Binh-Minh Nguyen**, Darin Hoffman, Andrew Hood, Manijeh Razeghi, "High performance focal plane array based on InAs/GaSb superlattices with an 11 μ m cut-off wavelength.", IEEE Journal of Quantum Electronics, Vol. 44, No 5, p.462 (2008).
http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?isnumber=4459775&arnumber=4459778&count=13&index=7
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24. Pierre-Yves Delaunay, **Binh-Minh Nguyen**, Darin Hoffman and Manijeh Razeghi, "Substrate removal for high quantum efficiency back side illuminated type-II InAs/GaSb photodetectors", Applied Physics Letters, Vol. 91, p. 231106 (2007).
<http://link.aip.org/link/?APL/91/231106>
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25. Pierre-Yves Delaunay , Andrew Hood , **Binh-Minh Nguyen** , Darin Hoffman , Yajun Wei, Manijeh Razeghi, “*Passivation of Type-II InAs/GaSb double hetero-structure*”, Applied Physics Letter, Vol. 91, No. 9, pp.091112 (2007).
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26. **Binh-Minh Nguyen**, Darin Hoffman, Pierre-Yves Delaunay, Manijeh Razeghi, “*Dark current suppression in type II InAs/GaSb superlattice photodiodes with M-structure barrier*”, Applied Physics Letters, Vol. 91, p. 163511 (2007).
<http://link.aip.org/link/?APL/91/163511>
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27. Darin Hoffman , **Binh-Minh Nguyen** , Pierre-Yves Delaunay , Andrew Hood , Manijeh Razeghi, Joe Pellegrino, “*Beryllium compensation doping of InAs/GaSb infrared superlattice photodiodes*”, Applied Physics Letter, Vol 91, 143507 (2007).
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28. **Binh-Minh Nguyen**, Darin Hoffman, Pierre-Yves Delaunay, Manijeh Razeghi, Vaidya Nathan, “*Polarity inversion of Type II InAs/GaSb superlattice photodiodes*”, Applied Physics Letter, Vol. 91, No. 10, pp. 103503 (2007)
<http://link.aip.org/link/?APL/91/103503>
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29. **Binh-Minh Nguyen**, Darin. Hoffman, Yajun. Wei, Pierre-Yves Delaunay, Andrew Hood, Manijeh Razeghi, “*Very high quantum efficiency in-Type II InAs/GaSb superlattice photodiodes with a cutoff of 12μm*”, Applied Physics Letters, Vol. 90, No. 23, p. 231108 (2007)
<http://link.aip.org/link/?APL/90/231108>
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30. Andrew Hood, Pierre-Yves Delaunay, Darin Hoffman, **Binh-Minh Nguyen**, Yajun Wei, Manijeh Razeghi, and Vaidya Nathan, “*Near bulk-limited R0A of long-wavelength infrared type-II InAs/GaSb superlattice photodiodes with polyimide surface passivation*”, Appl. Phys. Lett. 90, 233513 (2007).
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31. E.C.F. da Silva, D. Hoffman, A. Hood, **B-M Nguyen**, P-Y. Delaunay and M. Razeghi, “*Influence of residual impurity background on the nonradiative recombination process in high purity InAs/GaSb superlattice photodiodes*”, Appl. Phys. Lett. 89, 243517, (2006).
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32. A. Hood, D. Hoffman, **B-M Nguyen**, P-Y Delaunay, E. Michel and M. Razeghi, “*High differential resistance Type II InAs/GaSb superlattice photodiodes for the long-wavelength infrared*”, Appl. Phys. Lett. 89, 093506, (2006).
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Conference Proceeding:

33. A. Haddadi, S. R. Darvish, G. Chen, A. M. Hoang, **B.-M. Nguyen**, and M. Razeghi, “Low frequency noise in 1024×1024 long wavelength infrared focal plane array based on type-II InAs/GaSb superlattice”, Proc. of SPIE, vol 8268, 8268X (2012)
<http://dx.doi.org/10.1117/12.913983>
34. “G. Chen, **B.-M. Nguyen**, A. M. Hoang, E. K. Huang, S. R. Darvish, and M. Razeghi, “Suppression of surface leakage in gate controlled type-II InAs/GaSb mid-infrared photodetectors”, Proc. of SPIE 8268, 826811 (2012)
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35. A. Haddadi, S. R. Darvish, G. Chen, A. M. Hoang, B.-M. Nguyen, and M. Razeghi, “High Operability 1024×1024 Long Wavelength Infrared Focal Plane Array Base on Type-II InAs/GaSb Superlattice”, 15TH INTERNATIONAL CONFERENCE ON NARROW GAP SYSTEMS (NGS15), AIP Conf. Proc. 1416, pp. 56-58 (2011)
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36. M Razeghi, E. K. Huang, **B-M. Nguyen**, S. Ramezani-Darvish, S. Abdollahi Pour, G. Chen, A. Haddadi, M-A. Hoang, “Recent advances in high performance antimonide-based superlattice FPAs”, Proc. of SPIE vol 8012, 80120T (2011) (**invited**).
<http://dx.doi.org/10.1117/12.887597>
37. M. Razeghi, S. Abdollahi Pour, E-K. Huang, G. Chen, A. Haddadi, B-M. Nguyen, “High Operating Temperature MWIR photon detectors based on Type II InAs/GaSb superlattice.”, Proc. of SPIE, vol 8012, p. 80122Q (2011) (**invited**).
<http://dx.doi.org/10.1117/12.888060>
38. **B-M Nguyen**, G. Chen, M-A. Hoang, M. Razeghi, “Growth and characterization of long wavelength infrared Type-II superlattice photodiodes on a 3" GaSb wafer”, Proceeding of SPIE, vol. 7945, p. 79451O, (2011).
<http://dx.doi.org/10.1117/12.879860>
39. M. Razeghi, E. K. Huang, **B.-M. Nguyen**, S. A. Pour, and P.-Y. Delaunay, "Type-II antimonide-based superlattices for the third generation infrared focal plane arrays," Proceeding of. 7660, 76601F-14 (2010).
<http://dx.doi.org/10.1117/12.849527>
40. M. Razeghi, **B.-M. Nguyen**, P.-Y. Delaunay, S. A. Pour, E. K.-w. Huang, P. Manukar, S. Bogdanov and G. Chen, “High-operating temperature MWIR photon detectors based on type II InAs/GaSb superlattice” in Quantum Sensing and Nanophotonic Devices VII (SPIE, San Francisco, California, USA, p. 76081Q. (2010) (**Invited**).
<http://dx.doi.org/10.1117/12.840422>

41. **B.-M. Nguyen**, S. A. Pour, S. Bogdanov and M. Razeghi, “*Minority electron unipolar photodetectors based on type II InAs/GaSb/AlSb superlattices for very long wavelength infrared detection*”, Quantum Sensing and Nanophotonic Devices VII (SPIE, San Francisco, California, USA, 2010), p. 760825.
<http://dx.doi.org/10.1117/12.855635>
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Invited Seminars

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67. University of Chicago, host by Prof. Phillippe Guyot-Sionnest, October 2011, “Type II Type II InAs/GaSb superlattice: an artificial low dimensional interacting system”.
68. Center for Integrated Nanotechnologies, Los Alamos National Lab, host by Dr. Shadi Dayeh, “Type II Type II InAs/GaSb superlattice: an artificial low dimensional interacting system”.

Book Chapter:

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